

Claims

1. Secure identification apparatus for remote transaction enablement, the apparatus comprising:

a user interface having a first input part for receiving user information of a respective user, and a second input part for receiving an identification sequence comprising an encryption of a combination of a user identifying element and a time varying element,

a database of identification sequencing information for a plurality of users, said sequencing information corresponding to at least said user identifying element,

an identification processor, associated with said user interface and said database, for determining whether said identification sequence comprises a user identifying element corresponding to said respective user, and

a transaction validation unit, for using said determination to enable a transaction.

2. The apparatus of claim 1, wherein said transaction validation unit is operable to enable said transaction by using said identifying element to obtain an account number of a user with a transaction service provider.

3. The apparatus of claim 1, wherein said identification sequence is a sequence of up to sixteen characters.

4. The apparatus of claim 1, wherein said identification sequence is a sequence of up to four characters.

5. The apparatus of claim 1, wherein said identification sequence is a sequence arrangeable into a credit card number format.

6. The apparatus of claim 1, wherein said sequencing information further comprises said cryptographic function.

7. The apparatus of claim 6, wherein said cryptographic function is a reversible function and said identification processor comprises functionality for carrying out said cryptographic function in reverse to obtain said identification code.

8. The apparatus of claim 6, wherein said cryptographic function comprises a one-to-one reversible function.

9. The apparatus of claim 6, wherein said cryptographic function comprises a one-to-one trapdoor function.

10. The apparatus of claim 6, wherein said cryptographic function comprises an irreversible function, said identification processor being operable to insert said identification code and said time varying information into said cryptographic function to attempt to reproduce said user manageable identification sequence.

11. A method of secure identification for remotely enabling a transaction, the method comprising:

receiving user information input,

receiving a user manageable identification sequence,

using said user information input to retrieve corresponding sequencing information,

processing said sequencing information to determine whether it corresponds with said received user-manageable identification sequence,

assigning a positive outcome to said identification if said identification sequence is found to correspond with said retrieved sequencing information, and

enabling said transaction if said outcome is positive.

12. The method of claim 11, wherein enabling said transaction comprises:

obtaining valid account information of a user, using said identification information, and

providing to a transaction service provider said valid account information.

13. The method of claim 1, wherein said valid account information is in the format of a credit card number.

14. The method of claim 11, wherein said identification sequence is a sequence of up to sixteen characters.

15. The method of claim 11, wherein said user manageable sequence is a sequence of up to four characters.

16. The method of claim 11, wherein said sequence is a sequence arrangeable into a credit card number format.

17. The method of claim 11, wherein said sequencing information comprises an identification code associated with said respective user, time changing information and a cryptographic function.

18. The method of claim 17, wherein said processing sequence information comprises carrying out said cryptographic function in reverse to obtain said identification code.

19. The method of claim 6, wherein said cryptographic function comprises a one-to-one reversible function.

20. The method of claim 6, wherein said cryptographic function comprises a one-to-one trapdoor function.

21. The method of claim 6, wherein said cryptographic function is an irreversible function, said identification processor being operable to insert said identification code and said time varying information into said cryptographic function to attempt to reproduce said user manageable identification sequence.

22. Secure identification system for enabling of remote transactions, the system comprising:

a user key generator for generating an identification sequence, using a user identification code, time changing information and an encryption function,

a user interface having a first input part for receiving user information of a respective user, and a second input part for receiving said identification sequence,

a database comprising user information and corresponding user identification codes and cryptographic functions,

an identification processor, associated with said user interface and said database, for using said cryptographic function to determine whether said identification sequence comprises a respective identification code corresponding to said user information, thereby to carry out secure identification of said respective user, and

a transaction number database associated with said identification processor, for using said identification code to obtain user account information for passing to a transaction service provider.

23. The system of claim 22, wherein said identification sequence is a sequence of up to sixteen characters.

24. The system of claim 22, wherein said sequence is a sequence of up to four characters.

25. The system of claim 22, wherein said sequence is a sequence arrangeable into a credit card number format.

26. The system of claim 22, wherein said sequence is a user-manageable sequence.

27. The system of claim 22, wherein said user identification code comprises a time constant element.

28. The system of claim 22, wherein said identification processor comprises functionality for carrying out said cryptographic function in reverse to obtain said identification code.

29. The system of claim 22, wherein said cryptographic function comprises a one-to-one reversible function.

30. The system of claim 22, wherein said cryptographic function comprises a one-to-one trapdoor function.

